



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,181	06/20/2003	Paul Eugene Thomas	15838-243002	9696

7590 01/11/2006

JOSEPH A. TESSARI  
TREDEGAR FILM PRODUCTS CORPORATION  
1100 BOULDERS PARKWAY  
RICHMOND, VA 23225

EXAMINER

HAND, MELANIE JO

ART UNIT	PAPER NUMBER
----------	--------------

3761

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/600,181	<b>Applicant(s)</b> THOMAS ET AL.	
	<b>Examiner</b> Melanie J. Hand	<b>Art Unit</b> 3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-12,14-16,20-25,29,33,37 is/are rejected.
- 7) ☒ Claim(s) 2-4,13-15,17-19,26-28,30-32,34-36 and 38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant has amended Claim 23 to be directed to a void volume on the male side of an apertured film to be  $750\text{ }\mu\text{m}^3$ , changed from the original volume claimed of  $750\text{ cm}^3$ . Applicant did not address this amendment and has labeled the status of the claim as Original, which is incorrect. Examiner advises Applicant that any changes executed in this manner in the future will result in a Notice of Non-Compliant Amendment.

### ***Terminal Disclaimer***

The terminal disclaimer filed on August 17, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Patent No. 6,610,904 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Response to Arguments***

Examiner is withdrawing the double patenting rejection of Claim 23 as Claim 23 is directed to a void volume on the male side of an apertured film of  $750\text{ }\mu\text{m}^3$ , and all of the claims directed to a particular void volume in the cited Patent in the rejection

Applicant's arguments, see Remarks, filed August 17, 2005, with respect to the rejection(s) of claim(s) 37, 38 and 40 under 35 U.S.C. 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references.

With regard to applicant's argument regarding the rejection of claim 39 under 35 U.S.C. 103, Examiner has fully considered this argument and finds said argument persuasive.

Examiner is also withdrawing the rejection of claim 39, however upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 23 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. A male side void volume of  $750 \mu\text{m}^3$  is not supported in any manner in the disclosure and represents new matter.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6, 7, 11, 12, 16 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ahr et al (U.S. Patent No. 4,323,069).

With respect to **Claim 1**: Ahr teaches catamenial pad 10 having topsheet 12, absorbent core 16 and intermediate layer 40 disposed between the topsheet 12 and absorbent core 16. Layer 40 is comprised of a nonwoven film thus having two opposing surfaces and having a plurality of tapered capillaries 42 that define male and female sides. As can best be seen in Fig. 2, the walls of capillaries 42 define a void space between layer 40 and absorbent core 16. (Col. 11, lines 35-38, 50-52)

With respect to **Claim 6**: Ahr teaches that topsheet 12 is formed by placing a heated thermoplastic film against a wire screen and a vacuum is then used to draw the film against said wire screen. (Col. 7, lines 42-47)

With respect to **Claim 7**: Ahr teaches that capillaries 42 have base openings 44. Openings 44 channel fluid that flows through apertures in topsheet 12 to the absorbent core. (Col. 11, lines 38-42)

With respect to **Claims 11 and 12**: Although Ahr is silent regarding one particular shape for the base openings 44, Ahr does teach a base opening dimension that by itself is capable of fully describing a circular or hexagonal opening (Col. 12, lines 2,3), thus Examiner is concluding that Ahr is teaching that openings 44 are all circular, all hexagonal or a combination of the two and thus will form a pattern that is hexagonal and circular.

With respect to **Claim 16,20**: As can best be seen from Figs. 2 and 5, Ahr teaches void volume space that is defined by the walls of capillaries 42 and is present on both the male and female sides of layer 40.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 5,24,25,29,33 rejected under 35 U.S.C. 103(a) as being unpatentable over Ahr ('069) in view of Biagioli et al (U.S. Patent No. 5,635,275).

With respect to **Claims 5,24**: Ahr does not teach a second three-dimensional apertured film facing said absorbent core. Biagioli teaches first and second three-dimensional apertured films A and B laminated together, both with a top surface, bottom surface and protuberances extending from said bottom surface on each film. ('275, Fig. 9) ('275, Col. 10, lines 40-51) Biagioli teaches that the laminated film is comprised of substantially identical material to that of the intermediate layer taught by Ahr ('275, Col. 3, lines 42,43, '069, Col. 7, lines 37,38) and is useful in applications such as absorbent articles where a larger embossed thickness for fluid storage is needed, therefore it would be obvious to one of ordinary skill in the art to modify the intermediate layer taught by Ahr to be further comprised of a second three-dimensional apertured film identical to first intermediate layer 40 and laminated to said first intermediate layer to enhance fluid transfer and temporary storage capabilities as taught by Biagioli.

With respect to **Claim 25**: Ahr teaches topsheet 12.

With respect to **Claims 29,33**: As can best be seen from Figs. 2 and 5 ('069), Ahr teaches void volume space that is defined by the walls of capillaries 42 and is present on both the male and female sides of layer 40.

Claims 37 and 40 rejected under 35 U.S.C. 103(a) as being unpatentable over Davis ('052) in view of Ahr ('069).

With respect to **Claim 37,40**: Davis teaches an apertured film 20 (Fig. 1) that overlays an absorbent layer 14 with absorbent core material (Fig. 1) and that is arranged in a pattern containing apertures 22 (Fig. 2) that wick exudates away from the top layer 12 to the absorbent layer 14. These apertures extend downward from the surface 24 of the top layer 12 toward the absorbent layer, a configuration that is identical to placing such apertures of a film on the male side of the distribution layer disclosed by Applicant. Davis teaches that the top layer is bonded to the absorbent layer at the apices of the apertures, creating a series of flow channels on the surface of the absorbent layer. The apertures form pillar structures between the top layer and absorbent layer that divert and slow fluid on the absorbent layer to increase the absorbency of the layer. Davis teaches that this diversion is a one-way capillary action, the speed of which varies throughout the absorbent core due to the variation in size and absorbency of absorbent material fibers throughout the layer 14, and once a fiber is saturated, the flow of exudates continues across the top surface 24 to other unsaturated areas.

Davis does not teach that apertured film 20 operates in association with a topsheet. Ahr teaches catamenial pad 10 having apertured topsheet 12, absorbent core 16 and intermediate layer 40 disposed between the topsheet 12 and absorbent core 16. Layer 40 is comprised of a nonwoven film thus having two opposing surfaces and having a plurality of tapered capillaries 42 as is also taught by Davis. Ahr teaches that a catamenial pad having such an intermediate three-dimensional film in combination with a topsheet exhibits improved rewet characteristics ('069, col. 12, lines 7-11), therefore it would be obvious to one of ordinary skill in the art to

modify the article taught by Davis by placing a topsheet over the apertured film as taught by Ahr.

Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davis ('052) in view of Ahr ('069) as applied to claims 37 and 40 above, and further in view of Biagioli ('275).

With respect to **Claim 39**: The combined teaching of Davis ('052) and Ahr ('069) does not teach a second apertured film. Biagioli teaches first and second three-dimensional apertured films A and B laminated together, both with a top surface, bottom surface and protuberances extending from said bottom surface on each film. (Fig. 9) ('275, Col. 10, lines 40-51) Biagioli teaches that the laminated film is comprised of substantially identical material to that of the intermediate layer taught by Ahr ('275, Col. 3, lines 42,43, '069, Col. 7, lines 37,38) and is useful in applications such as absorbent articles where a larger embossed thickness for fluid storage is needed, therefore it would be obvious to one of ordinary skill in the art to modify the intermediate layer taught by Ahr to be further comprised of a second three-dimensional apertured film identical to first intermediate layer 40 and laminated to said first intermediate layer to enhance fluid transfer and temporary storage capabilities as taught by Biagioli.

***Allowable Subject Matter***

Claims 2-4, 13-15, 17-19, 26-28, 30-32, 34-36 and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

A thorough search of the prior art of record did not reveal references that teach or fairly suggest an absorbent article having an acquisition or distribution layer comprised of a three



dimensional apertured film having at least one raised ridge extending from a topsheet to a female side of said three-dimensional film, a total void volume space defined by said three-dimensional film that is greater than  $500\text{ cm}^3$ , a mesh count for the apertures of between 2 and 25 or void volume spaces on a male or female side of a three-dimension apertured film that are greater than  $500\text{ cm}^3$ , or an absorbent article with an acquisition layer comprised of two three-dimensional apertured films and having at least one raised ridge extending from a topsheet to a female side of the first apertured film and having total void volume, and female and male side void volumes for said first film, each greater than  $500\text{ cm}^3$ .

The closest prior art of record is the combined teaching of Ahr ('069) and Biagioli ('275). The combined teaching of Ahr and Biagioli teaches an absorbent article with an intermediate layer between a topsheet and absorbent core comprised of two three-dimensional apertured films laminated together defining a void space between said film laminate and said absorbent core. Ahr does not teach any void volumes and neither does Biagioli, thus neither does the combined teaching of Ahr and Biagioli. U.S. Patent No. 5,490,846 to Ellis et al teaches a nonwoven web well suited for use as a surge layer, however Ellis does not teach that this void space is defined by three-dimensional apertures, therefore a combined teaching of Ahr and Biagioli and Ellis would not teach the claimed invention. U.S. Patent No. 4,463,045 to Ahr teaches a three-dimensional nonwoven web suitable for an absorbent article acquisition layer having a filament mesh count of 160 filaments x 160 filaments per square inch, with a fiber diameter between one and two mils ( $=1/1000\text{ inch}$ ), yielding an aperture mesh count of 840 x 840 per square inch assuming a void space defining an aperture is equal to the space occupied by one fiber. This mesh count does not anticipate the claimed invention, and therefore a combined teaching of Ahr ('069) and Biagioli ('275) and Ahr ('045) also would not teach the claimed invention.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie J. Hand whose telephone number is 571-272-6464. The examiner can normally be reached on Mon-Thurs 8:00-5:30, alternate Fridays 8:00-4:30.

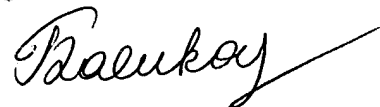
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Melanie J Hand  
Examiner  
Art Unit 3761

MJH

TATYANA ZALUKAEVA  
SUPERVISOR, PRIMARY EXAMINER



Application/Control Number: 10/600,181  
Art Unit: 3761

Page 10